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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/788,569 | 02/21/2001 | Tomoki Ayabe | F-10970 | 5929 |

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EXAMINER

DANG, DUY M

ART UNIT PAPER NUMBER

2621

DATE MAILED: 07/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/788,569

Applicant(s)

AYABE, TOMOKI

Examiner

Duy M Dang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-8 and 11-13 is/are rejected.
- 7) ☒ Claim(s) 4, 5, 9, 10, 14 and 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Figures 3-6 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 1-3, 6-8, 11-13 are rejected under 35 U.S.C. 102(a) as being anticipated by the Applicant's admitted prior art (referred as "AAPA" herein after) as described in page 1 line 11 to page 8 line 19.

Regarding claim 1, the AAPA teaches:

(a) determining whether or not a typical prediction should be performed [see block S21 (typical prediction exists?) in figure 2 and page 3 lines 11-12)];

(b) if a result of determination at step (a) is negative (i.e., the "NO" resulted from step S21 in figure 2 and mentioned in page 3 lines 12-13), determining whether or not all the pixels in a region composed of lines [These features are met by the encoding process S26 (the one on the right side) of figure 2. This encoding process S26 further detailed in figure 3 comprises block S93 (all three blocks are white) for determining whether or not all three blocks are white (see page 5 lines 22-23). These three blocks compose of lines (see S90-S92 of figure 3 and further detailed on figure 5B)] including pixels constituting a context (see figures 5C-5D) are white (the

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so called “all pixels are white” is inherently included in the white block determined by block S93);

(c)if a result of determination at step (b) is affirmative (see the “YES” result from block S93 of figure 3), determining whether or not a predicted value corresponding to a context of which all the pixels are white is white [Note that this feature is met by the encoding process S95 of figure 3. This encoding process S95 further detailed in figure 4 comprises block S110 (predicted value = actual value?) for determining whether or not the predicted value is white according to page 7 lines 13-15];

(d)if the result of determination at step (a) is affirmative [see the “YES” result from block S21 (typical prediction exists?) of figure 2], performing a first single line encoding process [see “one line encoding process” shown at S26 (note the “one line encoding process”, the one on the left side) of figure 2. This one line encoding process S26 detailed in figure 3 comprises a “first single pixel encoding process S95”];

(e)if the result of determination at step (b) is negative (see the “NO” result from block S93 (note the “all three blocks are white?”. This block S93 is to determine whether or not the three blocks are white. If the result of this block S93 is negative or “NO”, this implies that not all three blocks are white or there is at least one non-white pixel existed in any of the three blocks) of figure 3], performing said first single line encoding process [see “first single pixel encoding process” shown at S95 of figure 3 (note that there are two blocks S95, see the one on the left side)];

(f)if the result of determination at step (c) is negative [see block S110 (predicted value = actual value?) of figure 4 and the text portion mentioned in page 5 line 26. Note that figures 4 is

a detailed representative of blocks S95 (first single pixel encoding process) generally shown in figure 3], performing said first single line encoding process [see block S120 (process for case that prediction is unsuccessful) of figure 4 and the text portion mentioned in page 5 line 26 to page 6 line 10]; and

(g) if the result of determination at step (c) is affirmative [see block S100 (predicted value = actual value?) of figure 4 and text portion mentioned in page 6 line 11. Note that figures 4 is a detailed representative of blocks S95 (first single pixel encoding process) generally shown in figure 3], performing a second single line encoding process (see blocks S44 (process for case that prediction is successful) of figure 4 and text portion mentioned in page 6 lines 11-22).

Regarding claim 6, it is noted that this claim recites a computer program product having similar features called in claim 1 above. The AAPA further teaches a computer program shown at 201 in figure 1 and mentioned in page 2 lines 13-16.

Regarding claim 11, it is noted that it is an apparatus claim reciting similar features called in method claim 1 above. Thus, claim 11 is also rejected for the same reasons as set forth in claim 1 above.

Regarding claims 2, 7 and 12, the AAPA further teaches:

(d-1)forming a context for each pixel in a target line [see block S94 (forming context from image data) of figure 4 and the “context” represented in figure 5D];

(d-2)reading from a probability estimation tables a range width for prediction-miss which corresponds to the context formed at step (d-1) [see “probability estimation table” shown at 202 of figure 1 and mentioned in page 5 lines 16-17 and page 8 lines 3-8];

(d-3)updating a range width showing probability that combination of white and black appears using said range width for prediction-miss [see page 5 lines 21-23];

(d-4)predicting a value of each pixel in said target line on the basis of the context corresponding to the pixel [see figure 5C and page 5 lines 12-13]l;

(d-5)if the prediction is unsuccessful, performing a prediction-miss process for the pixel concerned [see page 5 lines 26-27 and S110 of figure 4]; and

(d-6)if the prediction is unsuccessful, performing a normalization process for the pixel concerned [see page 5 line 26 to page 6 line 1 and S110 of figure 4].

Regarding claims 3, 8 and 13 the APA further teaches wherein first single line encoding process further comprises the steps of:

(d-7)if the prediction is successful, determining whether or not a normalization is necessary for each pixel in said target line [see S110 of figure 4 and page 6 lines 11-14. Note that the S43 of figure 4 corresponds to the so called "normalization"];

(d-8)if a result of determination at step (d-7) is affirmative, performing a prediction-hit process for the pixel concerned [see page 6 lines 14-15];

(d-9)if the result of determination at step (d-7), performing said normalization process for the pixel concerned [see page 6 lines 14-16].

4. Claims 4-5, 9-10, and 14-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ushida (US Patent No. 6,577,768) is an example of coding system.

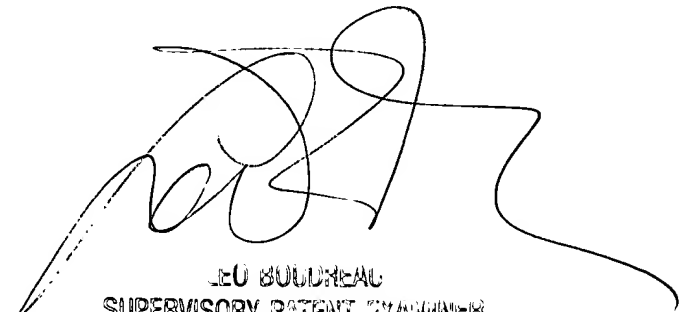
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duy M Dang whose telephone number is 703-305-1464. The examiner can normally be reached on Monday to Thursday from 6:30AM to 5:00PM..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo H Boudreau can be reached on 703-305-4706. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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6/24/04



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